



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,788	08/01/2003	Paul C. Wacker	H0005416 (1161.1128101)	5829
128	7590	03/15/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			TANNER, HARRY B	
			ART UNIT	PAPER NUMBER
			3744	

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,788

Applicant(s)

WACKER, PAUL C.

Examiner

Harry B. Tanner

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-9, 12-15, 21-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittman. Pittman discloses the invention substantially as claimed. Pittman discloses a method and system for controlling a HVAC system having a heating unit and a cooling unit in which the heating and cooling units are both operated if the room temperature is below the set point temperature and the humidity is above the humidity set point (see blocks 80, 88 and 90 of Figure 3) and only the cooling unit is operated if the room temperature is above the set point temperature regardless of the humidity in the room (see blocks 80 and 82 of Figure 3). Pittman modulates the heat output provided by the heating unit during the dehumidification operation (block 88, 90 of Figure 3) in order to match the heating and cooling outputs during dehumidification. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have eliminated the modulation of the heating unit during the dehumidification operation, since it has been held that omission of an element and its function in a combination (i.e. control of modulation valve 56) where the remaining elements perform the same functions as before involves only routine skill in the art. In re Karlson, 136 USPQ 184. It would further have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Pittman such that heating and cooling systems were sized to meet the expected

heating and cooling loads in order to eliminate the need for any additional heating and cooling units.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittman as applied to claim 1 above, and further in view of admitted prior art. It is taken to be admitted prior art that the use of computers to control HVAC systems were conventional at the time the invention was made in view of the lack of applicant's arguments to the contrary in response to the Official Notice of same in the previous Office Action. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Pittman such that it included the use of a computer to control the heating and cooling units wherein the control program would inherently be stored on computer-readable medium.

Claims 4 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittman as applied to claim 1 above, and further in view of Alford. Alford teaches the use of multiple stages of cooling in which heating and cooling units are operated together if only the first stage cooling is required and the humidity is above the humidity set point (see blocks 210, 216, 218, 220 and 222 of Figure 6) and only the cooling units are operated if second or more stages of cooling are required regardless of the humidity in the room (see blocks 210, 220 and 224 of Figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Pittman such that it included the use of multiple stages of cooling in which heating and cooling units are operated together if only the first stage cooling is required and the humidity is above the humidity set point and only the cooling units are operated

if second or more stages of cooling are required regardless of the humidity in the room in view of the teachings of Alford.

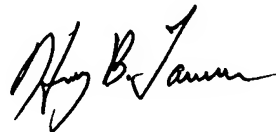
Claims 16-18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittman as applied to claim 1 above, and further in view of Coffman. Coffman teaches the use of a forced air furnace in order to provide heating to an inside space. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Pittman such that it used a forced air furnace in order to provide the heating rather than hot water coil in view of the teachings of Coffman.

Applicant's arguments filed on December 8, 2004 have been fully considered but they are not persuasive. For example, with respect to applicant's contention that the system of Pittman uses a modulated heating unit during the dehumidification operation whereas the claimed invention recites using an unmodulated heating unit during the dehumidification operation, it is noted that applicant is claiming a simpler control system than that of Pittman in which less control over the temperature in the inside space will be provided. To remove the control of the modulating valve during the dehumidification operation and eliminate the more accurate temperature control of the inside space would involve only routine skill in the art and would not produce an unobvious result.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry B. Tanner whose telephone number is (571) 272-4813. The examiner can normally be reached 8:30 am to 6:00 pm Monday, Tuesday, Wednesday and Friday and 2:00 pm to 6:00 pm Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel, can be reached on (571) 272-4808. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Harry B. Tanner
Primary Examiner
Art Unit 3744